

REMARKS

This Response, filed in reply to the Office Action dated April 5, 2006, is believed to be fully responsive to each point of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

Claims 1-24 are all the claims pending in the application. The Examiner has rejected claims 1-24 and has also objected to claim 1.

I. Formalities

The Examiner has indicated that the drawings filed on September 24, 2001, have been accepted.

II. Claim Objections

The Examiner has objected to claim 1 but has indicated that a correction is not required. The Examiner suggested changing the claim language for clarity. (Please see Office Action at page 3.)

Applicant submits that the claim language is sufficiently clear. If the Examiner maintains that the change is necessary, then the Examiner is requested to contact the undersigned to discuss the nature of the requirement.

III. Claim Rejections - 35 U.S.C. § 112

The Examiner has rejected claims 23 and 24 under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. Specifically, the Examiner contends that the claimed subtraction of the image formed from processing using the first shape-dependent filter from the object image to form the fine structure image contradicts the language in claims 1 and 8. The Examiner contends

that claims 1 and 8 recite that the fine structure image is the result of the first shape-dependent filter.

Applicant respectfully submits the following arguments in traversal of the rejection.

Claim 1 recites a method of detecting an abnormal pattern candidate that comprises “performing processing ... on the object image, a fine structure image....being thereby formed...” The claimed processing utilizes a first shape-dependent filter in accordance with a shape of a microcalcification pattern. Claim 8 recites a similar feature.

Applicant submits that the claim language does not necessarily recite that the fine structure image is the result of the first shape dependent filter, only that the claimed processing, which utilizes a shape-dependent filter, forms the fine structure image. Accordingly, the claimed processing is not limited to just using the shape-dependent filter and may include other steps such the claimed subtracting as set forth in claims 23 and 24.

Therefore, the subject matter of claims 23 and 24 do not contradict claims 1 and 8, respectively, as contended by the Examiner and are not indefinite.

IV. Claim Rejections - 35 USC § 102

The Examiner has rejected claims 1, 7, 8, 14, 17, 18, 23 and 24 under 35 U.S.C. § 102(b) as being anticipated by Nishikawa *et al.* (US 5,598,481). [“Nishikawa”]. For at least the following reasons, Applicant traverses the rejection.

Claim 1 recites a method of detecting an abnormal pattern candidate that comprises “performing processing, in which a first shape-dependent filter in accordance with a shape of a microcalcification pattern is utilized, on the object image, a fine structure image, which illustrates a fine structure area embedded in the object image, being thereby formed...” The

Examiner still contends that the preprocessing performed by the noise reduction filter of Nishikawa corresponds the claimed processing utilizing a shape-dependent filter.

In response the arguments submitted in the filing of December 30, 2006, the Examiner contends that the first shape-dependent filter is defined as a morphological filter in the Specification and that the Specification does not further define the shape-dependent filter. (Office Action at page 2.)

Applicant submits that the Specification merely discloses that “the first shape-dependent filter should preferably be a morphological filter.” (Specification at page 8, lines 19-21, emphasis added.) Contrary to the Examiner’s contention the Specification does not limit an embodiment of the shape-dependent filter to only a morphological filter. The Specification clearly discloses that a morphological filter is a preferred embodiment of the first shape-dependent filter.

Federal Circuit case law and the MPEP are clear in that particular embodiments may not be read into the claims. See MPEP at 2100-48 which states the following:

1. (“Though understanding the claim language may be aided by explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, **a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment.**”); E-Pass Techs., Inc. v. 3Com Corp., 343 F.3d 1364, 1369, 67 USPQ2d 1947, 1950 (Fed. Cir. 2003). (emphasis added.)

Here, claim 1 does not even recite a morphological filter¹. Accordingly, limiting the shape-dependent filter to a morphological filter is clearly improper.

¹ The recitation that the first shape-dependent filter is a morphological filter is found in dependent claim 7.

In addition, whether the Specification does or does not further define the morphological filter is not relevant to the issue at hand. What is relevant is whether the disclosure in Nishikawa teaches the claimed shape-dependent filter as set forth in claim 1.

In this regard, Applicants clearly set forth arguments in the filing of December 30, 20005, that the noise reduction morphological filter of Nishikawa does not disclose or suggest the claimed shape-dependent filter in accordance with a shape of a microcalcification pattern, as set forth in claim 1.

Specifically, the noise reduction filter of Nishikawa merely reduces high frequency noise and is not designed to affect small structures (i.e., micro-calcifications). The noise filter operates on pixel values compared against surrounding values and eliminates large variations, such as spikes or pits. (Col. 21, lines 57-61.) This further supports that the noise filter is not shape dependent, which results in a fine structure area as claimed. Accordingly, the noise reduction filter of Nishikawa is not “in accordance with a shape of a microcalcification pattern” as set forth in claim 1. Even if, for the sake of argument alone, the noise reduction filter of Nishikawa may be construed as “shape” dependent, the “shape” would correspond to that of random noise (see col. 22, lines 4-50), not the “shape” of micro-calcification patterns. Therefore, Nishikawa does not disclose or suggest the claimed processing with a first shape-dependent filter as set forth in claim 1.

The Examiner does not substantively rebut the arguments that Nishikawa does not disclose or suggest the claimed shape-dependent filter. Instead, as best understood, the Examiner contends that an alleged lack of disclose in Applicants’ Specification regarding an unclaimed element of claim 1, rather than any actual disclosure in Nishikawa, forms the basis for

concluding “that Nishikawa’s noise filter implementing the morphological operations forms a fine structure image and meets the requirements of the first shape-dependent filter.” (Office Action at page 2.)

For anticipation under 35 U.S.C. § 102, the prior art must teach every aspect of the claimed invention. MPEP 700-23. Here, Nishikawa does not teach, either explicitly or implicitly, a shape-dependent filter in accordance with a shape of a microcalcification pattern. The teachings of the present Specification do not form a basis for rejecting a claim under 35 U.S.C. § 102.

Therefore, Applicant requests that the Examiner provide specific citations in Nishikawa that disclose a shape-dependent filter in accordance with a shape of a microcalcification pattern or withdraw the rejection.

Because independent claim 8 recites features similar to those given above for claim 1, Applicant submits that claim 8 is patentable for at least reasons similar to those given above with respect to claim 1.

Applicant submits that claims 7, 14, 17, 18, 23 and 24 are patentable at least by virtue of their respective dependencies.

In addition, the Examiner provides no substantive analysis in the rejection of claims 23 and 24, relying on the false assumption that the claims are indefinite. The claim recitations must nonetheless be examined on the merits. Because the claims are not indefinite for the at least the reasons given above, Applicant submits that claims 23 and 24 are patentable because Nishikawa does not disclose or suggest the claimed image formed from processing using the first shape-dependent filter, which is in accordance with a shape of a microcalcification pattern. Nishikawa

does not further describe the subtraction process of claims 23 and 24. Any new prior-art rejection must be on a non-final basis.

V. Claim Rejections - 35 USC § 103

The Examiner has rejected claims 2, 3, 9, 10, 15, 16, 19 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Nishikawa in view of Takeo *et al.* (US 5,714,764). [“Takeo”]. For at least the following reasons, Applicant traverses the rejection.

Because Takeo does not cure the deficient teachings of Nishikawa given above with respect to claims 1 and 8, Applicant submits that these claims are patentable at least by virtue of their respective dependencies.

With further regard to claims 2, 3, 9 and 10, these claims describe shape dependent filters selected from multiple shape filters having been prepared. The Examiner generally relies on Takeo, cols. 11-13, as teaching this feature. However, the cited portions relate to sensitivity adjustment for images rather than shape or structural dependencies. Therefore, claims 2, 3, 9 and 10 are patentable for this additional reason.

The Examiner has rejected claims 4, 5, 6, 11, 12 and 13 under 35 U.S.C. 103(a) as being unpatentable over Nishikawa in view of Doi *et al.* (US 4,907,156). [“Doi”]. For at least the following reasons, Applicant traverses the rejection.

Because Doi does not cure the deficient teachings of Nishikawa given above with respect to claims 1 and 8, Applicant submits that these claims are patentable at least by virtue of their respective dependencies.

The Examiner has rejected claims 21 and 22 under 35 U.S.C. § 103(a) as being unpatentable over Nishikawa in view of Applicant's Admitted Prior Art (AAPA). For at least the following reasons, Applicant traverses the rejection.

Claims 21 and 22 are patentable at least by virtue of their respective dependencies.

In addition, claims 21 and 22 recite that "the fine structure image comprises only structures approximately the size of microcalcifications and smaller." The Examiner concedes that the subject matter of claims 21 and 22 is not disclosed by Nishikawa but applies AAPA to allegedly cure the deficiency.

The Examiner cites a section of AAPA that disclose problems of the prior art. Specifically, that some prior art filters do not remove non-calcifications that are of identical size to a microcalcification.

Applicant submits that the Examiner has not made a *prima facie* case of obviousness. Merely identifying a problem does not form the basis for rendering obvious claimed elements. To make a *prima facie* case of obviousness, the Examiner must disclose the claimed feature in a prior art reference, then provide a motivation or suggestion for one skilled in the art to use the teachings of the reference to modify the system in Nishikawa and finally, show a likelihood of success for the suggested modification. See MPEP §2143.

Here, the Examiner has failed to provide any of the elements required to make a *prima facie* case of obviousness.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

RESPONSE UNDER 37 C.F.R. § 1.116
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Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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